

**DOUBLE-EFFECT PYROTECHNIC MICRO-ACTUATOR FOR
MICROSYSTEM AND MICROSYSTEM USING SAME**

Abstract

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The invention concerns the technical field of micro-actuators used for mechanical, chemical, electrical or thermal functions in microsystems, for microelectronic applications such as chips, or biomedical functions 10 such as microfluidics integrating cards. the invention concerns a micro-actuator (1, 60, 7) comprising a so-called main chamber (2,63,720), made in a solid support (3) and containing a so-called main pyrotechnic charge (6,721), said main chamber (2,63,720) being sealed and 15 delimited by solid support walls and by a deformable membrane (4,62,710), such that the gases emitted by the combustion of the main pyrotechnic charge (6,721), enable the volume of said chamber (2,63,720) to be increased by deforming said membrane (4,62,710) while 20 maintaining intact the solid walls of the main chamber (2,63,720). The invention is characterized in that it comprises means for evacuating the gases from the main chamber (720).